

REMARKS

Claims 26-42, 44 and 45 are pending in this application. By this Amendment, claims 44 and 45 are amended. No new matter is added by these amendments. Claim 43 is canceled without prejudice to or disclaimer of the subject matter recited therein. Reconsideration of the application based on the above amendments and the following remarks is respectfully requested.

The Office Action rejects claims 26, 29-31, 35, 40 and 43-45 under 35 U.S.C. §102(e) over U.S. Patent Application Publication No. 2002/0122178 to McMurtry et al. (hereinafter "McMurtry"). The rejection is respectfully traversed.

Claim 26 calls for an apparatus for measuring straightness in at least one plane and at least one of pitch and yaw in the movement of a first body with respect to a second body along an axis, in which one of the transmitter units and the optic unit is provided with at least one detector to detect two or more light beams.

The Office Action, on page 2, states that McMurtry's Fig. 8 and Paragraphs 57 and 2 disclose the above-mentioned features. However, Fig. 8 and Paragraphs 57 and 2 are silent with respect to the number of light beams or the arrangement of detectors.

McMurtry's Fig. 1 illustrates a single beam being reflected from the reflector housing 22 to a single detector 30. McMurtry's Fig. 4 illustrates an embodiment in which a single light source 24 produces three orthogonal beams A, B and C, which emerge from three orthogonal faces of the source housing (page 3, paragraphs [0041] and [0042]). However, the reflector housing 68 is releasably attached to each of the three faces of the source housing to align it in any one of the three orthogonal directions. Thus, reflecting just one beam A, B or C to a single detector 30. Because McMurtry only discloses an optic unit capable of detecting a single light beam, McMurtry fails to read on all of the features of independent claim 26.

Claim 44 calls for a method of measuring deviation in the movement of a first body with respect to a second body and includes the steps of determining the position of the light beam on the detector and adjusting at least one of the position of the transmitter unit and the movement vector of the second body in order to maintain the light beam on the detector during relative movement of the first and second bodies.

McMurtry fails to disclose using feedback from the detector 30 to adjust the position of the transmitter unit or movement vector of the second body to keep the light beam on the detector as the optic unit is moved relative to the transmitter unit.

Accordingly, Applicants respectfully request that the rejection be withdrawn.

The Office Action rejects claims 26, 27, 29-33, 35, and 41-45 under 35 U.S.C. §102(b) over U.S. Patent No. 4,939,678 to Beckwith, Jr. (hereinafter "Beckwith"); claim 28 under 35 U.S.C. §103(a) over Beckwith; claim 34 under 35 U.S.C. §103(a) over Beckwith in view of U.S. Patent Application Publication No. 2002/0122172 to Ross III et al. (hereinafter "Ross"); claims 37-38 under 35 U.S.C. §103(a) over Beckwith in view of U.S. Patent No. 5,335,548 to Kalibjian; claim 39 under 35 U.S.C. §103(a) over Beckwith in view of Kalibjian in view of U.S. Patent No. 4,999,618 to Inada et al. (hereinafter "Inada"); and claim 40 under 35 U.S.C. §103(a) over Beckwith in view of Kalibjian in view of U.S. Patent No. 6,343,228 to Qu. The rejections are respectfully traversed.

Claim 26 calls for an apparatus for measuring straightness in at least one plane and at least one of pitch and yaw in the movement of a first body with respect to a second body along an axis, in which the detection method for each light beam is substantially the same.

The Office Action, on page 4, states that Beckwith's Fig. 5 and col. 5, lines 21-42 disclose the above-mentioned features. However, Beckwith uses different types of detectors to detect the different light beams and, therefore, the detection methods are not substantially the same.

For example, Fig. 6 shows detectors 82, 84, 102, 104 and 118 for each returning light beam; the detectors 82 and 84 are photo sensors (col. 8, lines 53-54); the detector 102 is a four quadrant photodetector (col. 10, line 15 and col. 11, line 12); the detector 104 is a two quadrant photodetector (col. 11, line 10); and the detector 118 is a four quadrant photodetector (col. 11, line 41). Thus, Fig. 5 clearly discloses that the optical detection method for each light beam is not substantially the same.

Claim 44 calls for a method of measuring deviation in the movement of a first body with respect to a second body and includes the steps of determining the position of the light beam on the detector and adjusting at least one of the position of the transmitter unit and the movement vector of the second body in order to maintain the light beam on the detector during relative movement of the first and second bodies.

Beckwith fails to disclose using feedback from the detector to adjust the position of the transmitter unit or movement of the vector of the second body to keep the light beam on the detector as the optic unit is moved relative to the transmitter unit.

None of the remaining applied references, either alone or in combination, overcome the deficiencies of Beckwith in disclosing or suggesting the above-mentioned features of independent claims 26 and 44.

Accordingly, Applicants respectfully request that the rejections be withdrawn.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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JAO:RHR/khm

Attachment:
Petition For Extension of Time

Date: February 26, 2008

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